#### => d his full

```
(FILE 'USPAT' ENTERED AT 14:37:57 ON 03 SEP 1997)
            54 SEA 395/187.01/CCLS
L1
L2
            295 SEA 395/186,200.55,200.59/CCLS
L3
           1465 SEA 340/825.31,825.34/CCLS
            177 SEA 395/726/CCLS
L4
             49 SEA 395/188.01/CCLS
L5
           1964 SEA (L1 OR L2 OR L3 OR L4 OR L5)
L6
L7
             7 SEA PROXY AGENT#
            979 SEA FIREWALL
L8
             77 SEA (FIREWALL/AB)
L9
            232 SEA PROXY
L10
              1 SEA L10 AND L9
L11
L12
          19439 SEA PACKET#
              4 SEA L9 AND L12
L13
           3023 SEA PASSWORD#
L14
L15
              3 SEA L8 AND L9 AND L14
           1252 SEA BEEPER
L16
L17
              2 SEA L8 AND L16
           4545 SEA RANDOM NUMBER#
L18
L19
            180 SEA TRANSACTION LOG?
L20
            139 SEA DAEMON#
L21
              0 SEA CHANGEROOT
L22
             24 SEA UNIX (10A) ROOT
L23
              0 SEA L8 AND L22
L24
              1 SEA L8 AND L20
L25
              0 SEA L8 AND L19
L26
              7 SEA L8 AND L18
             52 SEA PACKET FILTER?
L27
             1 SEA L8 AND L27
L28
L29
            955 SEA 380/3,4,48/CCLS
L30
              2 SEA L8 AND L29
```

#### FILE USPAT

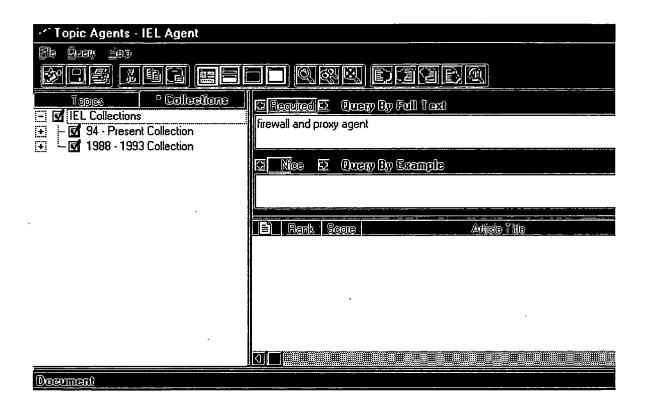
#### Result

## Search Options:

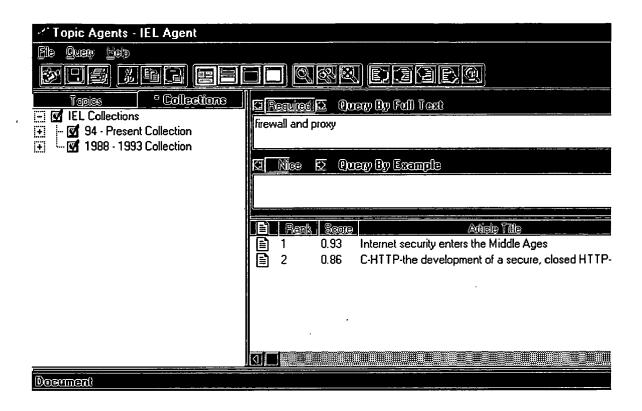
Search for both singular and plurals: YES
Search for spelling variants : YES
Display intermediate result sets : NO

Num	Search	Н
its #1 16	firewall	
#2 3	proxy agent	
#3 0	#1 and #2	
#4 41	proxy	
#5 2	#1 and #4	

Page 1

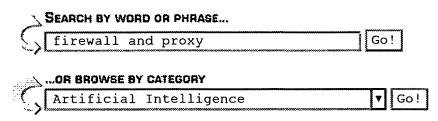


ODE Done: 0 of 371907









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# proxy server

Last modified: June 16, 1997

A <u>server</u> that sits between a <u>client application</u>, such as a <u>Web browser</u>, and a real server. It intercepts all requests to the real server to see if it can fulfill the requests itself. If not, it forwards the request to the real server.

Proxy servers have two main purposes:

- Improve Performance: Proxy servers can dramatically improve performance for groups of users. This is because it saves the results of all requests for a certain amount of time. Consider the case where both <u>user</u> X and user Y access the <u>World Wide Web</u> through a proxy server. First user X requests a certain <u>Web page</u>, which we'll call Page 1. Sometime later, user Y requests the same page. Instead of forwarding the request to the Web server where Page 1 resides, which can be a time-consuming operation, the proxy server simply returns the Page 1 that it already fetched for user X. Since the proxy server is often on the same <u>network</u> as the user, this is a much faster operation. Real proxy servers support hundreds or thousands of users. The major online services such as <u>Compuserve</u> and <u>America Online</u>, for example, employ an array of proxy servers.
- Filter Requests: Proxy servers can also be used to filter requests. For example, a company might use a proxy server to prevent its employees from accessing a specific set of <u>Web sites</u>.

SEE ALSO:

firewall server

Web server

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	D <sup>R</sup> S	OLOMON'S	<b>Anti-Virus</b>
Bunkana	مقضعت سيط	and manner than	

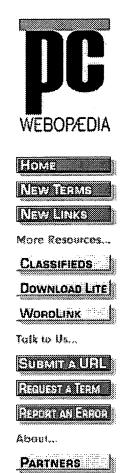
1 FEEDBACK

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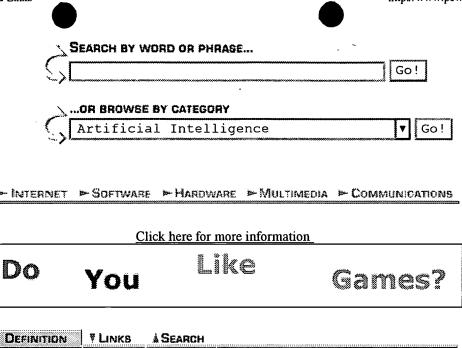
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firewall

Last modified: May 29, 1997

A system designed to prevent unauthorized <u>access</u> to or from a private <u>network</u>. Firewalls can be implemented in both <u>hardware</u> and <u>software</u>, or a combination of both. Firewalls are frequently used to prevent unauthorized <u>Internet</u> users from accessing private networks connected to the Internet, especially <u>intranets</u>. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified <u>security</u> criteria.

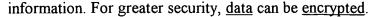
There are several types of firewall techniques:

- Packet filter: Looks at each <u>packet</u> entering or leaving the network and accepts or rejects it based on user-defined rules. Packet filtering is fairly effective and transparent to users, but it is difficult to configure. In addition, it is susceptible to <u>IP spoofing</u>.
- Application gateway: Applies security mechanisms to specific applications, such as <u>FTP</u> and <u>Telnet</u> servers. This is very effective, but can impose a performance degradation.
- Circuit-level gateway: Applies security mechanisms when a <u>TCP</u> or <u>UDP</u> connection is established. Once the connection has been made, packets can flow between the hosts without further checking.
- Proxy server: Intercepts all messages entering and leaving the network. The <u>proxy server</u> effectively hides the true network addresses.

In practice, many firewalls use two or more of these techniques in concert.

A firewall is considered a first line of defense in protecting private





#### SEE ALSO:

extranet intranet IP spoofing network

proxy server

security

& DEFINITION

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⇒ ? ← Outstanding Page

## Firewall lab test - article

Data Communications article (March 21, 1997) on the performance results of 20 firewall products. Reveals trends, product features and downfalls. Updated on Aug 27, 1997

# Paper on Internet firewalls and security

This paper, from 3Com, focuses on many of the issues relating to the construction of Internet firewalls, including their benefits, limitations, building blocks, and examples of firewall system topologies. Updated on Jul 13, 1997

## Rotherwick firewall resources

Contains over 900 firewall and Internet security links as well as introductory information on firewalls and network security. Updated on Jul 18, 1997

# TechTools article on firewalls

This TechTools article, from January 22, 1997, provides a good description of firewall technology including functionality, ease-of-use and hybrid systems, and links to a firewall feature table and pricing and platform information. Updated on Aug 26, 1997

#### Firewall documents and product resources

Provides links to firewall documents, products and a mailing list.

#### Firewall product overview

Contains a directory of commercial firewall products. Updated on Apr 19, 1997

#### Firewalls FAQ

Contains answers to basic questions about firewalls. Updated on Jun 22, 1997

#### Firewalls mailing list

This is the sign-up page for an Internet firewall mailing list.

#### Trusted Information Systems home page

Home page of Trusted Information Systems, a provider of network security products. This page provides links to a company overview, products and services, and research.

#### Yahoo!'s firewall companies page

Yahoo!'s directory of firewall companies. Updated on Aug 16, 1997

#### Yahoo!'s firewall page

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#### Yahoo!'s firewall utilities page

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**80% Firewalls Mailing List: WWW proxy information** 

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Summary: NETSYS.COM Solaris Test Facility

2 80% Firewalls Mailing List: Re: SSL and HTTP filtering

Summary: NETSYS.COM Solaris Test Facility



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http://www.netsys.com





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# firewalls book

smb@research.att.com Tue, 26 Apr 94 17:42:45 EDT

- Messages sorted by: [ date ][ thread ][ subject ][ author ]
- Next message: John [Francis] Stracke: "WWW proxy information"
- Previous message: Kevin Altis: "Re: WWW proxy information"

Since I've received a fair number of questions about the book, I'll make one (and only one) post about it, with the prior permission of our esteemed host and (quasi-)moderator. The book is

Firewalls and Internet Security: Repelling the Wily Hacker William R. Cheswick and Steven M. Bellovin Addison-Wesley ISBN 0-201-63357-4 \$26.95, paperback

The book was printed yesterday (literally!); it should be in technical bookstores within a couple of weeks, and in larger general bookstores (i.e., Barnes and Noble) by the end of May. It will take somewhat longer for the book to reach non-U.S. locations. If you can't find it in your own neighborhood, you can order it directly from Addison-Wesley.

You can snarf the preface, table of contents, and cover from

research.att.com:/dist/internet\_security/firewall.book/\*

More stuff (i.e., an errata list) may show up there on occasion. There's a gopher and ftp server on aw.com, but they're not fully up to speed yet.

--Steve Bellovin

- Next message: John [Francis] Stracke: "WWW proxy information"
- Previous message: Kevin Altis: "Re: WWW proxy information"



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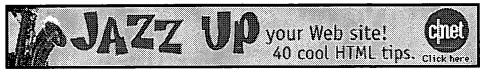
· Telnet basics

image-mapping tools

• NCSA Telnet software

• Web site

Netscape



Jazz up your Web Site. Click Here.

Powered by ()infoseck

Documents found: 28,261,070

Results 1-10 for: proxy agent and ncsa

Best matches first

1. CSci 229, Computer Security, Class Project Fall 95

Network Management and Security in Network
Management-SNMP CSci 229, Computer Security Term Project
Report Fall 1995 By Sanjay Kumar School of Engineering and
Applied Science George ....

http://wwwcib.bau.tu-dresden.de/~dirk/snmp/

2. <u>Argus Associates of Tampa, Inc.: DSP embedded system</u> microprocessor design

DSP embedded system microprocessor design. http://www.expert-market.com/argus\_tampa/

3. NewsMonger USENET Search Agent for the Internet

NewsMonger: An Internet USENET search and monitoring agent. Automatically monitors news group submissions. Supports Windows 95 & NT..

http://www.techsmith.com/products/nmonger/overview.htm

4. Application Note: SNMP Proxy Agent

Larscom Wordmark Logo Application Notes BannerSNMP Proxy AgentTechnical BulletinSNMP Management for Larscom Network Access DevicesSNMP (Simple Network Management Protocol) has emerged ....

http://www.larscom.com/an\_snmp.htm

5. CoBox Terminal Server, Ethernet and Token Ring

ACOLA Ethernet and Token Ring TCP/IP Terminal Server, standalone and integratable.

http://cobox.com/

6. Larscom SNMP Element Management System & Proxy Agent

Larscom Wordmark Logo Network Management Banner SNMPElement Management System & Proxy AgentContentsApplications and BenefitsLarscom SNMP Proxy AgentAlarm and Performance Rep .... http://www.larscom.com/nm\_snmp.htm

9/3/97 5:41 PM



#### 7. ovforum: Re: Proxy Agent Software

Re: Proxy Agent Software Brian Sullivan (brian@sed.stel.com) Wed, 30 Oct 1996 10:51:46 +0000 Messages sorted by: [ date ][ thread ][ subject ][ author ] Next message: POTTER .... http://www.ovforum.org/email/ovforum/0295.html

# 8. <u>Subject: proxyd -- SNMP proxy agent daemons from SNMP</u> Research. Keywords:

control, status; bridge, ethernet, IP, ring, star; NMS, SNMP; UNIX; library, sourcelib. Internet Tool Catalog PROXYD NAME proxyd -- SNMP proxy agent daemons from SNMP Research. .... http://www.duth.gr/lnfoBase/noc/proxyd.bxt

# 9. <u>Subject: proxyd -- SNMP proxy agent daemons from SNMP</u> Research. Keywords:

control, management, status; bridge, Ethernet, IP, OSI, ring, star; NMS, SNMP; UNIX; library, sourcelib. NAME proxyd -- SNMP proxy agent daemons from SNMP Research. KEYWORDS control,

http://www.duth.gr/InfoBase/noc/proxyd\_snmp\_research.txt

#### 10. Internet How to: Using Shell Accounts

Computer Currents Interactive web site is based on the successful formula of the Computer Currents magazine aimed at PC and Mac users in the late stages of the purchasing process. .... http://www.currents.net/cciu/advisor/netguide/nethowto5.html

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# **Network Management and Security in Network Management-SNMP**

CSci 229, Computer Security Term Project Report Fall 1995

By Sanjay Kumar School of Engineering and Applied Science George Washington University

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Subject: proxyd — SNMP proxy agent Lemons from SNMP Research
Keywords: control, status; bridge, ethernet, IP, ring, star, NMS, SNMP, UNIX, library, sourcelib

Internet Tool Catalog

**PROXYD** 

#### NAME

proxyd -- SNMP proxy agent daemons from SNMP Research

#### **KEYWORDS**

control, status, bridge, ethernet, IP, ring, star, NMS, SNMP, UNIX, library, sourcelib

#### ABSTRACT

SNMP proxy agents may be used to permit the monitoring and controlling of network elements which are otherwise not addressable using the SNMP management protocol (e.g., a network bridge that implements a proprietary management protocol) Similarly, SNMP proxy agents may be used to protect SNMP agents from redundant network management agents through the use of caches. Finally, SNMP proxy agents may be used to implement elaborate MIB access policies. The proxy agent daemon listens for SNMP queries and commands from logically remote . network management stations, translates and retransmits those as appropriate network management queries or cache lookups, listens for and parses the responses, translates the responses into SNMP responses, and returns those responses as SNMP messages to the network management station that originated the transaction. The proxy agent daemon also emits SNMP traps to identified trap receivers. The proxy agent daemon is architected to make the addition of additional vendorspecific variables a straight-forward task. The proxy application comes complete with source code including a powerful set of portable libraries for generating and parsing SNMP messages and a set of command line utilities.

#### MECHANISM

Network management variables are made available for inspection and/or alteration by means of the Simple Network Management Protocol (SNMP)

#### **CAVEATS**

None.

#### BUGS

None known

## LIMITATIONS

This application is a template for proxy application writers.

IETF NOCTools Working Group

[Page 95]

Internet Tool Catalog

PROXYD

Only a few of the many LanBridge 100 variables are supported

#### HARDWARE REQUIRED

System from Sun Microsystems, Incorporated

# SOFTWARE REQUIRED Sun OS 3.5 or 4 x

#### AVAILABILITY

This is a commercial product available under license from

SNMP Research
P.O. Box 8593
Knoxville, TN 37996-4800
(615) 573-1434 (Voice)
(615) 573-9197 (FAX)
Attn: Dr. Jeff Case

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